323 564 closely at Shamirpet only in six were the relations finally broken off on account of dissatisfaction to either or both parties. Non-agriculturists and such occupational castes as do not have arrangements with the potter buy their requirements from him for a cash price. The Kummari families of Shamirpet have more clients and customers in some of the neighbouring villages which have no potters' families living in them.

THE GOLLA

[361] 233 564 476 The shepherds occupy a block of their own in the village. Some of them cultivate small land-holdings, but the major source of livelihood for all of them is their traditional occupation of keeping herds of goats and sheep. They may keep one or two cows and buffaloes besides these herds which are their livelihood. They have an elaborate lore regarding these animals, and they are experts in caring for quite large herds. They train country dogs to help them in this, and with their aid prevent the goats from going [782] astray when they are taken out for grazing in the forest. By turns the Golla families in the village contribute goats or sheep for sacrifice in the village ceremonies. For this they are not paid. With this exception, they carry on all other transactions with the village people in cash. When people buy goats and sheep, the owner of the animal is always paid in cash. For goat's milk they expect spot payment, but arrangements for weekly or monthly payments may be made in the case of regular buyers. However, in one respect they may also enter into an agreement with the agriculturists which may entitle them to a small share of each harvest. After the harvest, when all the crops have been reaped, the agriculturists ask the Gollas to graze their herds on their fields and keep them penned in during the night. As there is very little fodder in the fields, the shepherds take the goats and sheep out for grazing in the nearby forest, and during the night keep them in the field. [241] The urine and dung of the herd is believed to be good manure, and as such this service is much in demand by the agriculturists. The shepherds often fix days with the agriculturists, and each one has his turn only on a limited number of days. According to the nature of agreement between the cultivators and the shepherds, the payment is either in cash or the latter collect their dues from the fields at the time of harvesting.

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agricultural season the Vaddars accept other work also for extra wages.

The Erkalas earn their livelihood through a variety of means. The menfolk are hunters. They are also adept in the use of snares and traps. They train hunting dogs and use them effectively for chasing and tracking wounded animals. When they succeed in getting some game, they retain a part of it for their domestic consumption and sell the rest to the villagers. The women beg in the countryside by singing songs and narrating legends. They also do some fortune-telling. Family earnings are supplemented by basket-making, a task at which both men and women work. They also rear pigs.

THE MADIGAS

The Madigas are the lowest caste in Shamirpet. Economically they constitute the poorest section of the community. While the Malas, who are also untouchables but a degree higher than the Madigas, either cultivate their own land or work as farm labourers for daily wages, the Madigas affiliate themselves to the households of the substantial agriculturists in the village. According to the size of the land-holding of the cultivator, one or more Madiga families permanently attach themselves to him. At every stage of agricultural operations during the year the attached Madiga, and his wife and children, work in the fields of their master. They are not paid any daily wages. After the crops are harvested they have to go and 'beg' in the master's fields or threshing grounds. The conventions of the community have prescribed the rates of payment, mostly on the basis of the area of land under cultivation and the yield during the particular harvest. Thus for a certain area a basic minimum must be given; but if on account of good crops the yield has been high it is expected that the affiliated Madiga family would be given a proportionately larger share. In former times there used to be considerable compulsion, and, being in no position to protest, the Madigas had to slave for their masters, who could be quite ruthless. If the master was kind and considerate, they regarded it as their good luck. On the whole it was advisable for them to tolerate even a bad master, for any protests or refusal to do the allotted work on their part would eventually have meant their being forced to leave the village. Now, of course, conditions have changed, and Madigas do not any longer put up with indig-

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nities, unreasonable harshness in behaviour or rough handling. Payments differ on the basis of the quality and quantity of work they turn out, and also partly on the nature and temperament of the employer. Slow and lazy workers are paid the barest minimum, while the experienced and the efficient earn much more. In the words of a Madiga, 'If we do not work well, who will pay us? If we do very little work and that too badly, we get what we deserve in the end. If we do not work well we cannot afford to be sensitive; we have to be thick-skinned to stand the abuse of our master. But if we work hard and earn our wages by the sweat of our brow, the master has to treat us well.' To quote another informant: 'Some masters are large-hearted. They make us work hard, but they feed us well. Others expect us to work like oxen, but when it comes to feeding us they dole out mere handfuls as if we were little calves. They always grumble and curse, but when it is time for making payment to us they seem to forget that we too must have a morsel to fill our bellies and a yard of cloth to cover our bodies.' In addition to what the Madiga families get by 'begging' at the time of harvesting, during the busy agricultural season they are fed once a day by the master. According to convention, the master should give a new cloth once every year to each individual from the attached Madiga family who has worked in his fields.

Very few Madigas possess any land worth mentioning, and therefore independent cultivation by them is almost negligible. But they have several other additional means of subsistence open to them. They have to dispose of the dead cattle in the village. As they do not refrain from carrion, this constitutes one source of food supply for them. They are also entitled to get one half of the hide of the dead animal; the other half belongs to the owner. From the owner's share of the hide the Madigas have to make for him such leather articles as he may require for agricultural purposes. Several Madiga families cure hides and work in leather; others earn a part of their living by playing drums and pipes at ceremonial occasions.

2. AGRICULTURE

The settled area of Shamirpet, including the two neighbouring hamlets, is spread over an area of 58 acres. Out of this Shamirpet proper occupies 31·4 acres. In the land surrounding the settlement,

311 ment, classified in government land records as belonging to this village, approximately 20·4 acres are covered by streams and small rivers, 25 acres by unmetalled roads and footpaths and 61 acres by irrigation channels. Thus apart from the 58 acres which provide the site for the village and the two hamlets attached to it, 106·4 acres are covered by these footpaths, channels and streams. The total land area of the village according to government records is 5,777 acres. Out of this 2,012 acres are uncul- ●241 tivable; 162·8 acres being covered with rocks and shrubs. In all 3,765 acres are under cultivation in the village: 3,339·5 acres are classed as 'dry land', for this area is irrigated entirely by the rains; and 425·6 acres are classed as 'wet land' as extra irrigation is available. Although the dry land occupies a proportionately wider area, it is much less productive than the wet land. In 1951–52, out of the total village land revenue of Rs. 9,137 (Hyderabad currency) only Rs. 3,982/4/- were derived as revenue on dry land, the rest came from wet land. The wet land is further classified into *ābi*, *tābi* and *do fasla* land. In the *ābi* land seeds are sown in the rainy season (June to July) and harvested in mid- or late winter (November to January). This type of land occupies 131 acres and yields a revenue of Rs. 1,332 per year. In the *tābi* land sowing is done in winter (October to November) and the crops are harvested in summer (April to May). *Tābi* land covers 162·4 acres in the village and yields a revenue of Rs. 1,868/12/0 per year. Finally 63·5 acres are classed as the much prized *do fasla* or two crop land. As the very name suggests, crops are sown and harvested on this land twice every year. Notwithstanding its small area this land yields a revenue of Rs. 1,208/12/0. All this wet land is irrigated by channels from the Shamirpet tank. Mention may also be made of another 68 acres, which are irrigated by small privately owned tanks and wells and bring to the government a revenue of Rs. 745/12/0 per year. Wet land is very much desired by the cultivators because of its high productivity and requirement of com- [436] paratively low investment. According to current valuation average wet land sells at Rs. 1,000 to Rs. 1,200 per acre.

241 433 It would only be natural to expect that in a primarily agricultural community the number of professional cultivators and others directly dependent upon agriculture should be the highest. Table I shows the number of people who are wholly agriculturists, partly agriculturists and partly field-labourers, and partly agri-

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culturists and partly dependent for subsistence on other crafts and professions. 241 433

TABLE I

Number of Families and People Depending on Agriculture as the Main Source of Livelihood.

Nature of agricultural work	*Total number of families*	*Total number of persons*	*Men*	*Women*	*Children*	*Number of people actually working*
1. Agriculturists (depending only on the cultivation of their land)	129	713	226	231	256	336
2. Partly agriculturists and partly field-labourers	154	803	249	271	283	493
3. Partly agriculturists and partly dependent on other crafts and professions	59	305	89	105	111	170

From the above it will be clear that 336 people actually employed whole-time in agriculture maintain 129 families consisting of 713 people. The other class is more numerous. In it 493 people working together maintain 154 families comprising in all 803 people. These partly cultivate their own fields and partly work as labourers with other agriculturists. The third category includes those who are partly agriculturists, and derive a part of their subsistence from some other craft or profession: 59 families having in all 305 people constitute this group.

The remaining fraction of the village population consists of people who contribute indirectly to agriculture or who have a function in some other field of community life. Table II gives the number of families and people in other occupations.

The figures in Tables I and II are for the main village of Shamirpet and do not include the agriculturists and occupational castes from the hamlets of Babugura and Upparpalli, which are regarded, in land records, as parts of Shamirpet. 241

ECONOMIC STRUCTURE

241 Out of a total of 3,765 acres of land under cultivation, the residents of Shamirpet are cultivating approximately 3,000 acres.

463 TABLE II

Craft or profession	*Total number of families*	*Total number of persons*	*Men*	*Women*	*Children*	*Number of people actually working*
1. Potters	5	21	6	7	8	14
2. Carpenters	4	15	5	5	5	5
3. Blacksmiths	4	28	8	11	9	8
4. Washermen	7	31	7	8	16	18
5. Toddy-tappers	16	99	29	34	36	53
6. Shepherds	21	108	31	42	35	69
7. Barbers	2	11	2	4	5	8
8. Goldsmiths	2	13	4	6	3	4
9. Stone-breakers	3	16	5	5	6	10
10. Erkala hunters	5	16	6	6	4	11
11. Traders and Shop-keepers	13	81	22	22	37	27
12. Government servants	46	211	70	60	81	90
13. Others	7	33	10	12	11	14

423 An analysis of the pattern of land-ownership in the village reveals the following:

i. A fourth of the land is owned by 1 family having 800 acres.
ii. A fourth of the land is owned by 8 families having 100 acres each.
iii. A fourth of the land is owned by 20 families having 40 acres each.
iv. A fourth of the land is owned by 160 families having 5 acres each.

The headman of the village is the biggest single land-owner. He belongs to the Reddi caste which is the dominant section of the group of agricultural castes in this area. The second category includes, besides the Reddis, two Muslims—one of whom is the Patwari of the village. Even in the third category approximately 40% of the land is held by the Reddis; the rest being shared by

ECONOMIC STRUCTURE

511 426 Analysis of the family budgets of the agriculturists in the village revealed that 10% of them were surplus, 24% were balanced and the rest were deficit budgets. Exact figures regarding the extent of indebtedness could not be obtained as the people invariably sought to conceal information on this subject. According to our rough estimate, 55% to 60% of the families are indebted. As relatively few persons can get agricultural or land improvement loans from the government at a reasonable rate of interest, and as there is no co-operative society in the village, most people have to take recourse to the money-lenders either in the village or, preferably, in a neighbouring one. Petty loans may be obtained from well-to-do shopkeepers and peasants. The rate of interest varies greatly. For large loans a mortgage is generally insisted upon, and anything between 6% and 12% compound interest is charged. For petty loans interest is charged at the rate of 2 annas per rupee per month. If ornaments or other valuables are pawned, the rate of interest is reduced even for the smaller loans. Borrowing in kind also takes place. Seeds are often obtained on loan, and are returned after the harvest with 25% interest. In several cases the indebtedness of the family could be attributed to over-spending in socio-religious ceremonies and litigation rather than to agricultural needs.

241 432 The organization of agricultural pursuits rests mainly on the head of the family, although grown-up sons—if they are living with the parents—are also consulted. When buying or selling land the advice of the elders of the extended family is always obtained. This has to be done before mortgaging family property against loans. The scope for individual initiative and innovations is very limited, for the system of agriculture still largely follows the traditional patterns and is governed to a great extent by the agricultural lore passed from generation to generation through oral tradition.

241 465 Most agriculturists can manage the cultivation of their fields with the help of family labour. The traditional system on inter-caste relations secures for them the specialized services of the occupational castes. The more well-to-do landowners have Madiga families attached to them. However, the migration of some Madiga families and concentration of considerable areas of land in the possession of a few families make it almost essential for many agriculturists to employ additional labour. In the busy season even

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ordinary cultivators have to employ casual labour. The rates of daily wages have now increased considerably. In 1939 a male labourer was paid 3 to 6 annas a day, while a woman was paid 2 to 4 annas. In 1951, men were paid between 1 rupee and 1 rupee 8 annas per day, while the women got 8 to 12 annas per day. Rich landowners employ labourers on the basis of an annual contract also. Rates of payment vary with the age, ability and experience of the person employed; and also partly with the financial position of the employer. According to our statistics wages differ from Rs. 280 to Rs. 120 per year, and may be paid in cash or kind. Depending on the agreement the employee may be paid a cash monthly salary, or he may be paid a part in cash and a part in grain. Very often the agreement includes the following in the wages for the year: an agreed sum at the end of the year, one or two meals a day or a specified quantity of grain every week, and a set or two of new clothes and footwear or a blanket. As a rule advances are drawn from time to time, and when they exceed the stipulated sum the labourer has to agree to work the following year also to repay the debt.

3. THE AGRICULTURAL YEAR

The agriculturists in Shamirpet follow the local almanac. Most of their moves in farm activity depend upon the position of the stars in the sky. According to this almanac a month is divided into two *katis*, each with a duration of approximately fifteen days. Each of these divisions bears a name which indicates a particular position of the stars. According to the traditional agricultural lore of the people the different *katis* are suitable for different kinds of agricultural activities and provide the agriculturist with a schedule for the different stages of his work in the field. Of course, he also takes into consideration other natural factors, such as the possibility of rainfall in the immediate future; but in general his moves follow the time-tested schedule of the Hindu calendar. Muslim agriculturists too follow this calendar and share with their Hindu neighbours their agricultural folklore.

In late summer (i.e. the end of May) the agriculturists keep their fields clear for ploughing in anticipation of a light shower of rain. Invariably there is some rainfall during this period which softens the ground and makes it possible for them to start ploughing. With the advent of this eagerly awaited drizzle the farmers

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241 can be seen carrying their wooden ploughs and driving their pairs of bullocks to the fields. No time must be lost, for the hardening of land may render ploughing difficult and this may eventually result in late sowing.

241 787 About this time they go to the Brahmin to fix an auspicious day for planting vegetables and creepers in their backyards. The Brahmin consults his almanac to find out a day on which the stars of the person and the constellation in the sky match, for such a day is believed to be most suitable for sowing vegetables. Fortified with these astrological predictions, the Hindu agriculturists make initial preparations for planting these backyard crops. Muslims and poorer Hindus do not avail themselves of the services of the Brahmin priest. Beds and pits are kept ready well in advance, and on the appropriate day suggested by the Brahmin (or fixed by the family if the priest has not been consulted) seeds are sown. In the rainy season almost everyone grows some vegetables and creepers, and these are in most cases the only vegetables regularly eaten in any part of the year. The favourites among these vegetables are: runner beans, snake-gourds and pumpkins. Bottle-gourd and sponge-gourd are planted a few days later. Okra, bringals and some other green vegetables are also grown.

241 Later, when more showers have fallen, the agriculturists hasten to sow maize and millet in the fields. A late variety of rice, locally known as *samber*, is sown in carefully made beds to be transplanted into regular fields later.

In the first two weeks of June operations started in late May are continued. Light showers at this time are further utilized to complete the ploughing. Sowing of maize is also continued. Late varieties of paddy are now directly sown into the fields. Fifteen to twenty days after sowing they visit the fields to remove the weeds.

[132] In the second half of June the rainfall is generally regular and satisfactory. During this time people must complete their sowing of *kharif* crops such as maize and millet. Ground-nut, linseed and other oil seeds are also sown during this period. All these crops are grown on dry land as they do not require any extra irrigation.

241 For a month and a half after this the sowing of paddy is continued. At this time mostly coarse and medium varieties are sown. These include two mixed strains developed by the Department of Agriculture, Hyderabad State, and are locally known as paddy

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nos. 12 and 19. A month after the sowing, weeds are removed from the fields. Labour is usually hired for weeding the wet fields, but in the fields on dry land this is done with a forked plough designed and used specially for this purpose. Immediately after the weeding they proceed to manure the fields. Many people now use an artificial fertilizer known as 'paddy mixture', which they buy from the Agriculture Department of the Hyderabad State government. On wet land some people sow fine and sweet-smelling late varieties of rice also. 241

The harvesting of the *kharif* crops, as well as the other first crops, has to be completed by October or early November. This is indeed the busiest season for most cultivators. Between the harvesting of these crops and the sowing of *rabi* crops (such as gram, castor, etc.) and the second crop of paddy the interval must be as short as possible. They have to expedite the former, in order that sowing for the new season may not be delayed. As a general rule the sowing of *rabi* crops precedes the second sowing of paddy in the wet-land fields.

With the slow advent of winter the village witnesses considerable agricultural activity. The *rabi* crops, i.e. gram, castor, chillies, mustard, tobacco, *til* (sesame), onions, garlic, coriander, *methi* (fenugreek) and several varieties of oil seeds are now sown. All these are dry land crops. With the exception of chillies, onions, garlic, tobacco, coriander and *methi*, which are sown near wells and are irrigated roughly once a week by the Persian-wheel, or by large leather buckets raised by bullocks, the other crops do not require any irrigation. Most of these crops are ready for harvesting in three to five months. Mustard, gram and coriander are ready in three months. Castor, chillies and tobacco take four months. The oil seeds take longer and may be harvested in the fifth or in the beginning of the sixth month. With the completion of the sowing of these crops, agriculturists take in hand the sowing of the second crop of paddy. Fields are flooded with water from the irrigation tank, ploughed and kept ready for sowing well in advance of the actual sowing time. If the flooding of the fields is not possible on account of the low water-level in the tank, showers of winter rains are awaited. For the second crop an early variety of paddy is generally chosen. This crop ripens in three to four months and does not make heavy demands on the limited irrigation facilities available in the village.

1: Dube E-5 (1951-52) 1955 AW17 Telugu AW17

241/461 As these crops become ready for harvesting, the annual cycle of agricultural activities comes very near to completion. When the harvesting is over, the farmers get a brief spell of rest and leisure. Now and then they go round the fields and remove the weeds and other wild plants. Their work during this part of the year does not necessitate hard manual labour. In a leisurely way they take in hand activities of a preparatory nature which are a prelude to their major agricultural work of the rainy season and winter. Manure from cow-dung pits is carried to the fields and is evenly spread there. Grass and other wild plants growing in the fields are removed. The land is kept ready for ploughing in a month's time. In a few days the signs of approaching rains compel them to cast off their lethargy. The preparations for ploughing inaugurate a new circle of annual agricultural activities, and the advent of late summer rains sends them back once again into the fields.

4. CATTLE AND DOMESTIC ANIMALS

[241] 231 Agriculture in the village still largely follows the age-old pattern. Even to-day old style bullock-drawn wooden ploughs are used by the agriculturists. In such a system the value of draught cattle is very great indeed, for efficient farming under these conditions depends to a very great extent upon the availability of good bullocks. Some agriculturists use male buffaloes for ploughing the fields, but bullocks continue to be their favourites. Cows and she-buffaloes are kept for milk. The shepherds keep large herds of goats and sheep. Some Muslims as well as Hindus, with the exception of the Brahmins and the Komtis, may also keep a few goats. Pigs are kept only by the Erkalas. Among domestic pets, dogs are popular with every section of the village population. The number of cats in the village is fairly large, but they are not kept as pets. Some people keep parrots in cages, and teach them to utter a few words. Three Muslims have domesticated partridges. A Hindu shopkeeper has a tiny blackbird in a cage hanging in front of his shop. Poultry is kept by all sections of the village population, except the Brahmins and the Komtis. In addition to the usual fowls, four families have ducks and turkeys also.

In connection with this study a survey of village animals was undertaken in May 1951. The result of the survey is summarized in the following tables:

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231 diseases. Plough-cattle are on the whole better looked after. But the neglect of the cow, traditionally regarded as 'the mother', is indeed pathetic. Absence of good breeding bulls and lack of grazing grounds further account for the poor condition of the cattle. In the absence of a good pedigree bull, scrub bulls of no particular [311] description are allowed to move freely among the cows. According to village land records there are 1,482 acres of pasture-land in the area surrounding the settlement; but this land is almost always auctioned to contractors from outside the village. As these pastures are not available for grazing to the village cattle, they roam about the shrubs and rocks around the village and eat whatever fodder is available there.

241 The shortage of draught-cattle is a serious handicap to the pros-
231 perity of average peasants in the village. The well-to-do agriculturists always have a sufficient number of cattle to meet their own agricultural requirements. But the average and poorer peasants find great difficulty in tilling their fields in time with the limited number of their own or hired cattle. Dependence on the monsoons obliges them to make certain variations in their agricultural schedule to fit in with the uncertainty of the rains. Some of their operations must precede the first rainfall; others must follow it almost immediately. For some days during the busy season this causes great pressure on available resources in men and cattle. The cultivators who depend on hired cattle or who practise co-operative lending and borrowing of cattle cannot take the best advantage of the first rains, and this enforced wait results in untimely sowing and poor crops.

234 The absence of good milch cattle affects the nutrition of the
146 people. In May 1951 the total daily yield of milk in the village
235 was about 14 lb. only. Earlier it has been pointed out that most people in the village keep poultry, but in general its quality is poor, and the production of eggs is estimated to be in the neighbourhood of 1,400 a year.

5. OTHER ECONOMIC PURSUITS

224 Before we pass on to the other occupations brief reference should be made to some common exploitative activities of the people.

Hunting is done regularly by a very limited number of people. Only the Erkalas have adopted it as a part of their profession.

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and social status. Important among these are: *Ugadi* (Telugu New Year's Day), *Rama Navami* (birthday of Rama; also regarded as his wedding anniversary), *Toli Ekadashi* (fast in honour of Vishnu), *Nagula Panchami* (worship of the cobra), *Rakhi Purnima* (day for the renewal of the sacred thread), *Krishna Ashtmi* (birthday of Krishna), *Chauti* (birthday of Ganesha, son of Shiva), *Petramasa* (day for offering water to the spirits of the ancestors), *Dasara* (celebration commemorating Arjuna's victory, with the help of Krishna, over the Kauravas), *Deepavali* (celebration commemorating the defeat of the demon king Narkasura at the hands of Krishna), *Til Sankranti* (day of the winter solstice marking the change of season, when days start gradually getting longer), *Shivaratri* (fast in honour of Shiva), and *Holi* (bonfires to commemorate the burning of Kamadeva, the god of love). In addition to these there are some festivals which are observed only by the higher castes, more particularly by the Brahmins, Komtis and Reddis. Important among these are: *Neela Gauri* (worship of Gauri, wife of Shiva, observed by Brahmins only), *Narsimha Jayanti* (day of Vishnu's incarnation as Narsimha—part human and part lion god, observed by Brahmins only), *Shravana Somwar* (Mondays in the Hindu month of Shravana, when Brahmins and Komtis observe a fast), *Ananta Chaturdashi* (the day when Vishnu incarnated himself as Ananta; observed only by Brahmins), *Kartika Purnima* (day for the worship of Gauri, observed only by Brahmin, Komti and Reddi women), *Vasant Panchami* (worship of household gods by Brahmins only), and *Rath Saptami* (worship of the Sun by Brahmins only). Two important agricultural rites observed by the families of cultivators are the First Sowing and the New Eating (Kottalu); each observed twice every year to inaugurate sowing operations and commencing the eating of grain from the freshly harvested crops. Ceremonies organized by the village as a whole are: the *Pochamma* festival (in honour of the goddess of smallpox), the *Batkamma* festival (in honour of Gauri; observed by village women) and the *Maisamma* festival (in honour of the goddess protecting the village boundaries). The different caste groups residing within the village have several caste festivals and ceremonies. For example, on the Dasara day the occupational castes worship their implements; the Gollas—caste of shepherds—have the festivals of Saudamma, Mallamma and Maude-Pochamma, all connected with their traditional occupation, and the untouchable Madigas have cults and related

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[241]

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165 The figures for deaths are in general accurate, according to information collected in the village, with the exception of the deaths in the cholera epidemic of 1911 and the small-pox epidemic of 1915. In the latter, according to non-official information between 80 and 85 children died, and 160 persons in all. The record of births appears to be very defective.

162 By the 1911 census there were 396 homesteads; there are now 430 to 440, there being many recent extensions of the inhabited village into the fields on the north and south.

An approximate statement of the population according to caste is as follows:—

	Adults.	Children.
Brahmans	25	13
Vaisyas	55	40
Sudras, Kammas	225	220
„ Kapus	275	240
Carpenters and silversmiths	33	24
Weavers	26	22
Barbers	10	4
Washermen	100	150
Toddy-tappers	283	305
Shepherds	52	33
Potters	4	2
Muhammadans	5	1
Oil-mongers	11	5

Land.

311

	Acres.
Wet land	Nil.
Dry land, cultivated	1,545·27
Land watered by wells	7·40
Common waste	145·36
Pasture other than common waste	415·82

Most of the land is cultivated by the pattadar, but 226 acres are sublet to tenants. There are about 350 agricultural workers who neither own nor rent land.

241 The following are the principal crops:—

	Acres.
Paddy	166·39
Cholam	468·88
Kambu	73·68
Gingelly	194·74
Horsegram	151·34
Ragi	...
Chodi	1·90
Korra	6·10
Chillis	0·67
Jute	1·80
Tobacco	1·34

151 Land is assessed for revenue at the following rates:—

	Per acre. RS.	A.	P.
Best black clay	1	12	0
Best black loam	1	10	0
Best red loam	1	10	0
Best red sand	0	10	0

1: Dube E-5 (1951-52) 1955 AW17 Telugu AW17

THE CHANGING SCENE

Changes in tools and technical processes are also important. 178
Barbers, carpenters, blacksmiths and goldsmiths are now using 413
factory-made tools and instruments. The village tailor has a sewing machine. It is significant that there has been no mentionable change in agricultural tools. In farming methods, however, some changes have taken place. Improved seeds are being used by 178
many cultivators. The value of green manure is realized by an 241
increasing number of agriculturists. Oil cakes, castor, ammonium sulphate, and a special concoction of chemical fertilizers known as 'paddy mixture' are now being used. More attention is given to growing vegetables. A greater percentage of cultivators is now growing 'cash crops'.

Communications too have now improved. Many persons take 178
advantage of the bus service. There are six private bicycles in the 489
village. A shop-keeper has four more which can be hired. The headman of the village has recently bought a 1928 model Ford. The traditional bullock carts are still largely used for transportation of goods, and also for travel.

The opening of a small dispensary in the village, and the 178
availability of excellent facilities of modern medical treatment in 755
the city have considerably changed the attitude of the people 757
towards diseases and their treatment. Although people still believe that smallpox and cholera are the result of the wrath of two goddesses and annually organize ceremonies in their honour on behalf of the village, the old fear of vaccination and inoculation has now practically disappeared. People no longer run away from the village on the appearance of the vaccinator, nor do they offer him bribes or threats for being spared the cruelty of vaccination. Divination, protective magic, chants and spells are all still employed to ward off disease and difficulty, but at the same time increasing use is being made of modern medicine. Age-old prescriptions of indigenous herbs are generally used for fevers and other common ailments. But when the disease takes a serious turn the patient may even be removed to a hospital in the city. Injections which were greatly feared a few decades ago are now eagerly sought as they are believed to give quick and sure relief from all ailments. Some people keep a limited stock of some of the popular and cheap patent medicines. Medicines for virility and strength prominently advertised in newspapers are obtained by post.

The social structure of the community is basically the same, 178

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311 [312] covers over 14,000 sq mls, largely on the indeterminate En marches of the region. Irrigation, though more important than in Maharashtra, accounts for only 8–9% of NSA and is over 60% from tanks. Fig. 136 brings out some points of the Maharashtra/Telangana contrasts, the Districts selected being comparable in area, while Ahmadnagar is not too specialised to cotton. The most striking features are the much smaller proportion of cultivation in Anantapur, and the far higher proportion of 'other food-grains', i.e. the poorer millets and pulses such as gram.

241 There is, however, considerable internal variation. Rice everywhere plays a much more prominent role than in most of Maharashtra, but still accounts for only 7% of NSA: dependent on the tanks, it is the food of the better-off agricultural classes. Jowar has the largest acreage (*c.* 5·4 m.), followed by bajra (*c.* 1·5 m., largely on lighter soils); significantly enough, gram is third with 600,000 ac. Maize is important in some Hyderabad Districts, nearly 10% of TSA in Karimnagar. Oilseeds are the dominant cash crop, approaching 4 m. ac. Groundnuts account for some 60% of this,[27] and in the Ceded Districts play something of the role of cotton in Maharashtra:

	NSA, 1948–49	*% of total area*	*Groundnuts*		
			"Normal"	*1948–49*	*1948–49, % of NSA*
Kurnool . .	2,074	41·5	476	267	12·5
Bellary . .	2,225	61·4	320	324	12·9
Cuddapah . .	1,000	26·3	187	182	16·9
Anantapur .	2,026	47·0	341	372	17·7
	7,325	43·7	1,324	1,145	15·6

Figures in thousand acres; the 1948–49 groundnuts total was 31% of that for Madras. Figures supplied by Mr C. D. Deshpande.

Jowar takes the heavier soils: "In a tract with just the minimum rainfall, 20–30 ins., groundnut is the most valuable kharif crop on light soils, where the soil is not heavy enough for jowar and rainfall not high enough for rice." Cotton has only half the acreage of oilseeds, and except on the black soils of the greater rivers, extrusions from Maharashtra, it is largely limited to the Raichur (Kistna/Tungabhadra) Doab: Raichur and Bellary Dts account for well over half the total acreage. In this area a high proportion of the rain comes late in the wet season; at Anantapur, a little to the E, 8·6 ins. fall in September alone, and July–September inclusive account for 15·6 of a total 27·4 ins. The rabi crop therefore tends to be more important than the

[27] S. Velayudham, "Groundnut in Madras", *IGJ* XXI (1946), 100–12 and 153–73; refce at p. 157.

kharif, especially on heavier soils which, with the intense May heat and late start of considerable rains, may not be workable till August. While groundnut is the kharif cash crop, cotton is entirely rabi. Jowar is grown for fodder as well as grain; ragi and other millets as well as rice are often wet crops; and millets are sown mixed with pulses, which take longer to mature and are a safeguard against the failure of the cereals. Most of these features point to the general precariousness of the agriculture in the region, which as a whole is a food-deficit area.

Differences of expert opinion in the two states long impeded work on the great dam, 1¼ miles long and 160 ft high, being built across the Tunga-

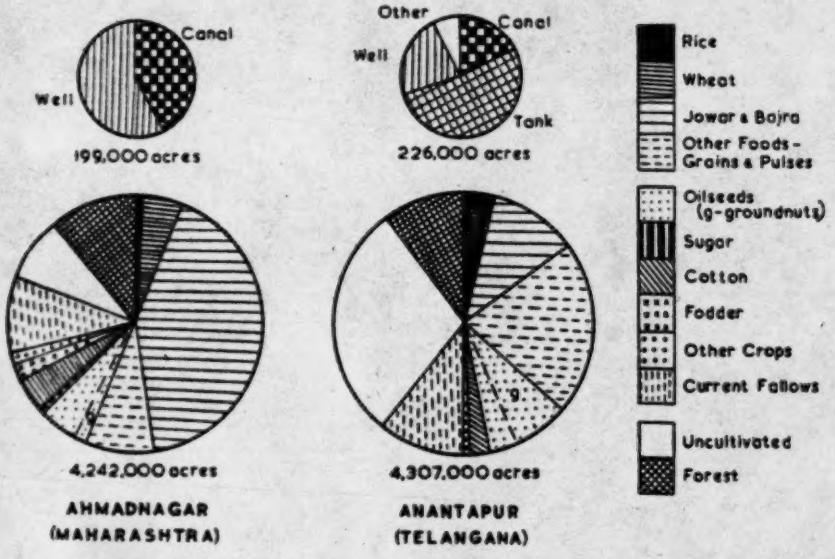

Fig. 136.—The Lava/Archaean Contrast. Upper circles represent areas irrigated.

bhadra: this will irrigate 600,000 ac. in Hyderabad and 300,000 in Madras, as well as generating about 150,000 kW. But the execution of the 7 major and some of the 32 minor projects in Hyderabad, which together might command 3·5 m. ac. and produce 500,000 kW, probably lies in an indefinite future. Terrain and climate impose severe limitations on Telangana, and the unlucky history of the Kurnool project (below, 680) suggests that a cautious policy may be essential for real progress.

Other Resources; Settlement and Towns

The mineral resources of Telangana are scattered and little exploited. The most important production is probably that of Gondwana coal, mined chiefly at Singareni; in NE Hyderabad are some outliers of the great iron

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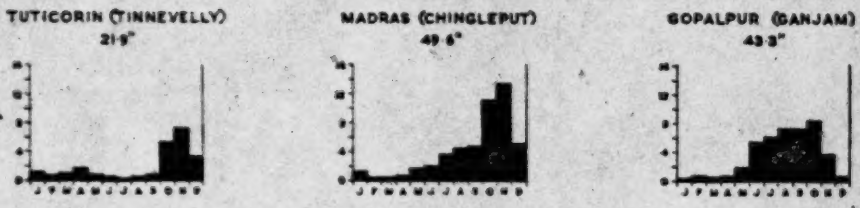
anomalous season of rain; but this is cut across by the deltas and, in the S especially, there is considerable regional diversity. Culturally also there is the great distinction between the Aryan-speaking (Oriya) lands N of Vizagapatam and the Dravidian S, itself divided into Andhra Desa (Telugu)

OT 312 241 132

THE EASTERN LITTORAL

RAINFALL REGIMES



IRRIGATION, RICE AND MILLETS

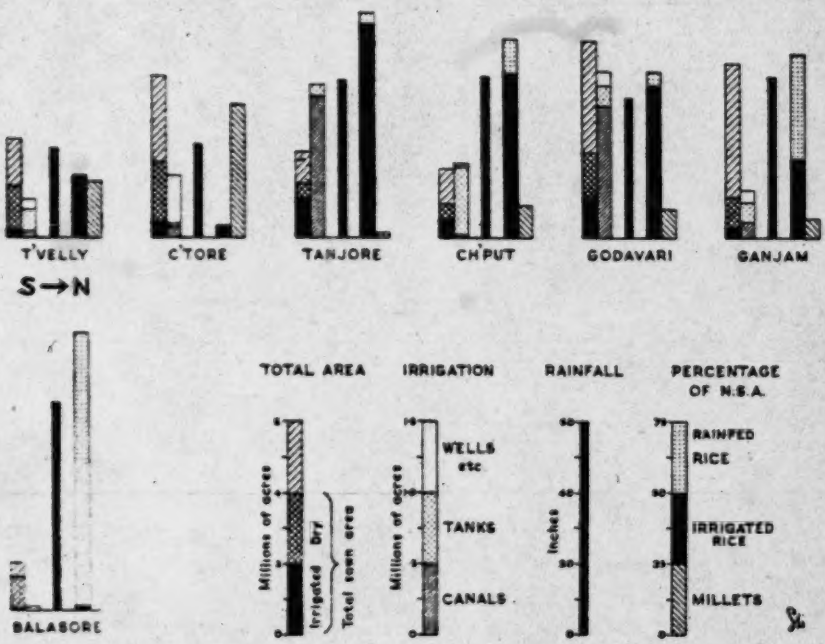


Fig. 139.—The Eastern Littoral: Rain, Rice, and Millets.

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12 m.; densities increase from Ganjam (420) to E Godavari (714) and then decrease to Guntur (393); beyond the regional limits Nellore, with more Archaean terrain than the central parts of the Circars, and less (and less reliable and well distributed) rain than the Nn, had only 204. On the whole it seems best to treat Ganjam/Vizagapatam and the deltas separately.

(a) *The North*: *Ganjam and Vizagapatam* (*Vizakhapatnam*)

Essentially this is the area with over 40 ins.: the three Sn taluks of Vizagapatam fall a little short of this. The lowland narrows to 12 miles under Mahendragiri, but on either side of this gate are the embayments of the Rushikulya (Ganjam) and the Languliya and Vansadhara (Vizag) valleys. The plains are floored by red lateritic soils near the hills, shading off into black loams and clays; but they are cut up by numerous irregular outliers of the En Hills: thus Vizagapatam itself lies between the 1600-ft Kailana Ridge to the N and the 1100-ft Yaroda to the S; the latter runs out to sea in the bold cliffs (300 ft) of Dolphin's Nose which shelters the port, while in the Nn suburbs of the town are the peculiar Waltair Highlands, *c.* 150 ft high and formed largely by the accumulation, since the Pleistocene, of red loams partly fluviatile and partly perhaps aeolian.[3]

Of a TSA of some 4 m. ac., rice accounts for about 1·65 m. ac., ragi 390,000, oilseeds (chiefly groundnut) 500,000, the balance being widely distributed amongst millets and pulses mainly. Irrigation is on the whole unimportant, much of it being dependent on temporary mud-and-brushwood dams across the short rivers.

Mineral resources are few—graphite, manganese, kaolin, mica—and hardly developed; a potential resource of some interest in this atomic age, though limited in amount in comparison with other *Indian* occurrences, is the ilmenite and monazite in the dunes and beaches around Vizagapatam.[4]

Industrial development—with the important exception of the Vizag shipyards—is again negligible: two or three jute and sugar mills in the Vizagapatam plains. Hydro-electric development in the hills might alter this.

Again there is only one real town, 'Vizag' itself (108,042), which has developed considerably since the opening of the railway up the Languliya valley to Raipur and the subsequent dredging of a deep-water harbour in the tidal marshes. The accommodation at quayside is limited, but it is more up-to-date than at most E coast ports. The selection of Vizag as the main shipbuilding centre of *India* is presumably because of its situation as the nearest *ocean* port to Jamshedpur, but it is still a long way round. Ships up to 8000 tons have been launched. The hinterland extends to Nagpur and the chief trade is in Madhya Pradesh (CP) manganese, and oilseeds and their products. The small ports of Bimlipatam and Gopalpur are quite

[3] See the very original paper by C. Mahadevan and N. Sathapathi, "The Origin of the Waltair Highlands", *IGJ* XXIV (1949), 26–51.

[4] *Ibid.*, *loc. cit.*, 29.

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133 311 The worn-down margin of the Archaean hinterland is poor country: undulating plains broken by little hills, with much waste and stony ground; soils are mainly lateritic with some loams. The coast for several miles inland is largely fringed with mangrove swamp (valuable as a fuel reserve) or sand-dunes rising to 30 or 50 ft. Between the relatively negative upland and the completely negative coast lie the rather limited areas of true delta. At Bezwada (Vijayarada), 45 miles inland, the Kistna crosses a low gneissic ridge in a 1300-yd-wide gap; this is utilised for the headworks of canals irrigating about 900,000 ac. The Godavari Delta begins 40 miles inland at Dowleshwaram, where a dam 2¼ miles long feeds canals for another 1 m. ac. (TSA; NSA 800,000). The deltas are of course liable to flood, at times disastrous; and cyclones are also a danger, that of 1864 causing 30,000 deaths and ruining the prosperity of Masulipatam port for ever. In the Kistna delta the land slopes away from the main distributaries at about 18 ins. to the mile, and in that of the Godavari below Dowleshwaram "the country is a vast expanse of ricefields dotted with gardens and villages. During the rains the greater part of this tract becomes one sheet of water, only village sites, canal banks, roads, and field boundaries appearing above it. Later in the year, as the rice grows higher, the dividing boundaries are hidden; and the whole country looks like a single ricefield, the groves around the villages, the road avenues, and the white sails of the boats gliding along the main canals breaking the uniform sea of waving green crop." [4] There is still a certain amount of local traffic, chiefly paddy, on the canals.

[312] [731]

Between the deltas Colair Lake occupies a depression not yet silted up, though constantly diminishing by natural and artificial encroachment; covering about 100 sq mls in the rains, it has at times dried out. Its numerous islands are intensively cultivated, and there is a good deal of fishing.

132 241 312 Rainfall exceeds 35 ins. only in the seaward half of the Godavari Delta, and the tendency to October maxima is unfavourable to the groundnut and early paddy harvests, while cotton sowings must be late. Irrigation, if not essential, is at least highly useful; its importance is reflected in the high densities (up to 1100 plus) of some delta taluks. The following figures (in thousand acres approximately) give a summary view of the agriculture:

241 311

	Total area	*NSA*	*TSA*	*Rice*	*Total foodgrains*	*Ground-nuts*	*Total oilseeds*
E Godavari.	3981	1072	1380	692	1070	4	142
W Godavari	1511	800	1111	697	823	42	115
Kistna	2270	1119	1225	572	877	185	195
Guntur	3684	2092	2384	400	1405	365	395

[4] *Ibid.*, 268–69.

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For the purely delta taluks, of course, the rice proportion would be higher. Tobacco covers some 200,000 ac. in all, the best being grown on temporary sand-islands in the larger streams. Some sugar is grown, but this tall and long-standing crop must be protected from cyclones by expensive fencing with bamboos.

Again mineral potentialities are slight and development slighter. There are two tiny unworked coalfields, of dubious value, in the Gondwanas along the Godavari; graphite and kaolin are worked in a small way, mainly for Rajahmundry paper mills (which use paddy straw as well as bamboo from the hills) and for the small crucible industry at the same town. Salt evaporation at Cocanada might lead to a chemical industry. Industry itself, though very small-scale, is interesting; as well as the Rajahmundry works just mentioned, and the rice and tobacco trades to be expected, there are cement, silk, fruit canning, and vegetable ghee works. Most of these are congregated along the Kistna below Bezwada and between Rajahmundry and Cocanada. Varied as it is, the total is not impressive: the crucible industry has 150 skilled workers, the paper mill a capacity of 3000 tons p.a.; the 77 rice mills in E Godavari employ only 1800 workers, the three silk factories 122; and the total industrial population of this District is only 7200—0·39% of total population, and at that not much below the figure for Madras State (0·42%). Such as it is, this industrial development has yet led to an ominous, if incipient, competition for land in a few tracts between tobacco and paddy; fortunately the region, except for Guntur, has a sizeable rice surplus (about 400,000 tons less 110,000 tons deficit in Guntur); and counting all foodgrains Guntur also has a surplus.[1]

The industrial, and to some extent the agricultural, future of the region will depend on whether or not the great Ramapadasagar multi-purpose scheme is executed; at present financial difficulties stand in the way. The proposed dam, 428 ft high with foundations 190 ft below the river bed, and 1½ miles long, would impound 15·6 m. ac.-ft of water, irrigate for paddy some 2·35 m. ac. of un- or under-developed land, improve the supply to 2 m. ac. already irrigated, and develop at least 100,000 kW; it might also, and less beneficially, trap the silt.

There are a fair number of minor towns. The site-significances of Bezwada (161,198) and Rajahmundry (105,276) are plain; Guntur (125,255) and Ellore (64,911) are trading centres with a little industry. The ports of Cocanada (75,140) and Masulipatam (59,146) are of little use. At Masulipatam large ships must lie 5 miles offshore (weather permitting!) and the half-dozen wharves are three miles up a winding creek; yet in early European days it was a place of great importance, famous for carpets and

[1] This discussion is based on (i) Dr. V. L. S. P. Rao's interesting summary of his doctoral dissertation, "Industrial Problems, Development, and Planning [in] . . . the Lower Godavari Region" (*IGJ* XXIII (1948), 1–15); (ii) V. V. Ramanadham and V. L. S. P. Rao, *Economic Atlas of Andhra Desa* (Calcutta, 1949).

25: Whitehead M-3. (no date) 1921 AW1 India
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of sacrifice. As soon as the victim is killed, the offerer dips his finger in the blood and puts it on his own forehead.

The annual festival of this goddess[1] lasts for a whole month, ending on the New Year's day of the Telugu calendar. During this festival the procession of pots is observed with special ceremony. Six brass pots, each about two feet high, with the figure of a cobra springing from below the neck and rising over the mouth of the pot, are draped with women's cloths and carried round the town on men's head. Nothing is put inside them, but, as they go round, the women of each house come out, pour water on the feet of the bearers, and make offerings of rice and fruit. These are solemnly presented to the pots by the bearers, and some powder is applied to the two small feet that project at the base of each pot, and form a sort of frame fitting on the bearer's head. The bearer then takes a little of the turmeric powder, that is already on the foot of the pot, and puts it into the dish in which the offering was brought, with a few margosa leaves from a bundle that he carries with him. The dish is returned to the woman who offered the gifts, which become the property of the pūjārī. The women and children of the family mark their foreheads with the turmeric, and put the margosa leaves in their hair. This is called *Ammavari-Prasādam.*[1] As they go round, the pūjārīs dance to the sound of tom-toms.

On the last day of the festival, when a buffalo is sacrificed, a curious ceremony takes place which is said to be very common in the villages of this district. After the head is cut off by the vetty,[2] who is a Mādigā, the blood is collected in a basin and nine kinds of grain and *gram*[3] are put into it. The basin is then put before the idol inside the shrine, and the

[1] The turmeric and the margosa leaves are a gift of grace (Sanskrit *prasāda*, grace) from the goddess. Food and water from the table of a Hindu god given to the worshippers in the temple are called *prasāda*.

[2] See above p. 56. [3] *Gram* is coarse lentils.

[1 [i.e. Nukalamma, at Cocanada -- Analyst]

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doors of the shrine are kept shut for three days. On the fourth day the doors are opened, the coagulated mass of blood, grain, and gram is carefully washed, and the grain and gram are separated on the ground behind the shrine, in order to see which of the various kinds of grain has sprouted. All the ryots eagerly assemble to watch the result, and whichever is found to have sprouted, is regarded as marked out by the goddess as the right kind of grain to sow that year. This method of determining which crop to sow is common in both the Godavari and Masulipatam districts. In these sacrifices to Nukalamma, too, the application of the blood is specially noticeable. As soon as the victim is killed, a small quantity of the blood is smeared on the sides of the door-posts of the shrine; the deputy-pūjārī dips his finger in the blood and applies it to his forehead; then all the other people present do the same; and afterwards some boiled rice and some turmeric powder are mixed with the blood, and a little of the mixture is sprinkled on the head of the Mādigā who holds the basin to catch the blood.

When an epidemic of cholera breaks out, another goddess, called Maridiamma, is installed in the place of the Nukalamma. A log of margosa wood, about three feet high and six inches in diameter, is cut and roughly carved at the top into the shape of a head, and then fixed in the ground with a pandal of leaves and cloths over it. Then the procession of the earthen pot half filled with buttermilk and rice is conducted, very much in the same way as at Masulipatam,[1] every day till the epidemic subsides. After that, some ten or twelve small carts are made, about six feet square, with three pointed stakes standing up on each side, on which live animals are impaled, as in other parts of the Telugu country.[2] The carts are partly filled with boiled rice and curry stuff prepared at the shrine, the blood of the victims sacrificed being poured over the rice. I was told that live animals were only impaled if a cart did

[1] See p. 62 above. [2] See p. 58 above.

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All this time[1] toes, some nautch—
girls come and dance in a booth erected in front of the image and work themselves up into a state of frenzy, during which they are supposed to be inspired by the deities, and utter oracles to the worshippers. When the epidemic begins to abate, the Brāhman pūjārī closes his part of the proceedings and departs.

Then, on that afternoon and evening, animal sacrifices are offered under the booth. On the first animal killed, which is generally a goat, water is poured from a brass vessel, to see if it shivers.[1] If it does, it is taken as a good omen that the goddess is propitiated and the disease will disappear. Then other animals are brought and, in accordance with a very common division of functions in the Telugu country, a washerman kills the sheep, goats, and fowls, and a Mādigā the buffaloes. The heads of the sheep and goats, as well as of the buffaloes, have the right forelegs put crosswise in the mouths, the faces smeared with fat from the entrails, and a lighted lamp placed above them. The blood is caught in a basket full of boiled rice, and the rice and blood are sprinkled round the village, while a Mādigā carries on his own head the head of a buffalo exactly as is done elsewhere. Here, too, great care is taken to prevent any person from another village taking away any of the rice and blood, lest the other village should get all the benefit of the sacrifice, and evils of all kinds descend on the unhappy villagers who have offered it. The ceremony of impaling live animals on stakes fixed round a wooden car,[2] and dragging them off to the boundary of the village is also practised here.

Bhīmadole, near Ellore. At another village, called Bhīmadole, about twenty miles from Ellore, I came across one of the few instances I have met with of any direct connexion between the harvest and the worship of a village goddess. There is an annual festival held there about harvest time, in November or December, lasting one day, which is always a Tuesday. About half a ton of rice is boiled in the middle of the village, taken

[1] See page 55. [2] See p. 58.

[See cat 116, p 68 -- ANALYST]

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to the shrine and presented in a heap before the image, with a lighted lamp on the top of it, made of rice flour kneaded into a paste, and holding about one pint of oil.[1] Some toddy is poured on the ground to the east of the rice by the washerman; incense and camphor are burnt; while the people make namaskāram (salutation with folded hands raised to the forehead) to the image. As many as two hundred sheep and goats are then killed, and fowls are brought by the poorer people. In this festival, the rice soaked in the blood of the victims is not sprinkled on the streets of the village nor over the houses, but each ryot gives a handful of it to one of his field servants (an Outcaste), who takes and sprinkles it over his master's fields. Three handfuls of the crop are cut on the same day to inaugurate the harvest. No buffaloes are sacrificed during this festival.

On the other hand, when an epidemic breaks out, there is a special festival, in which five or six buffaloes are sacrificed as well as about three hundred sheep and goats. The buffaloes are killed last of all. One special buffalo, called *Pedda-Veta*, great sacrifice, is reserved to the end, and killed at about ten p.m. Nothing special is done with the blood of the other buffaloes nor with that of the sheep and goats, but the blood of the Pedda-Veta is allowed to flow on to some of the rice, as soon as the head is severed, and both head and carcass are placed upon the rice heap. The head, as usual, has the right foreleg put in the mouth, with fat smeared over the face and a lighted lamp above it.

At about eleven p.m. the head is carried by aMālā, not by a Mādigā in this village, on his own head three times round the boundaries of the village site, and the rice soaked in blood is sprinkled by the Mālās on the ground, as they go, and on any cattle they happen to meet, accompanied by the same weird and excited procession as elsewhere.

The illustration facing this page represents a shrine of Poshamma, a goddess worshipped by the Mālās. On the top of the shrine stands an earthenware lamp.

[1] See p. 39.

31: Slater S-5 (1916-1917) 1918 AW1 India
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There are no other sources of water-supply. There are no streams or rivers belonging to the village. There is one at some distance, but its water is used to irrigate lands belonging to adjoining villages.

According to assessment—

Wet lands.						Dry lands.					
Rate per acre paid to zamindar.			Extent.	Revenue.		Rate per acre.			Extent.	Revenue.	
RS.	A.	P.	ACRES.	RS.	A. P.	RS.	A.	P.	ACRES.	RS.	A. P.
8	14	3	4·89	44	3 9	2	1	9	11·11	23	7 2
7	12	6	1·57	12	8 2	1	10	9	4·65	7	11 1
7	6	6	0·86	6	6 6	1	7	3	2·91	4	3 11
6	10	9	1·11	7	7 2	1	3	7	13·95	17	6 7
5	8	11	8·35	48	12 4	1	0	0	3·41	3	7 7
4	7	2	58·60	266	6 1	...			...	...	
									Total ...	442	0 4

Inams.

Dry lands.						Wet lands.					
Rate per acre.			Extent.	Revenue.		Rate per acre.			Extent.	Revenue.	
RS.	A.	P.	ACRES.	RS.	A. P.	RS.	A.	P.	ACRES.	RS.	A. P.
2	3	1	1·06	2	3 3	10	15	0	3·46	39	5 10
1	10	3	15·52	20	9 4	8	12	0	5·69	61	5 8
1	6	9	7·90	11	3 8	7	10	6	4·54	34	15 2
1	3	2	3·58	4	4 11	5	7	6	0·85	6	5 0
									Total ...	180	4 10
									Other lands ...	442	0 4
						Grand total of revenue received by zamindar ...				622	5 2

Occupation of land.—A very small area, 62½ cents of dry land, and 31 cents of wet, belongs to the zamindar himself and is cultivated by a tenant. Such lands are called "kanagi." The rent is Rs. 1-5-2 for the dry land and Rs. 2-11-0 for the wet land.

There are eight ryots who hold land under the zamindar, of these six cultivate their holdings, and two, of whom one is the karnam of the village, let their land to sub-tenants who pay in shares of the produce.

There are thirteen sub-tenants who own no land.

In cultivating paddy, ragi, cholam, sazzulu, and other such grains, half of the produce generally goes to the cultivator, and the other half to the zamindari tenant who lets out his land, all the straw going to the cultivator only, who supplies himself with all the necessaries for cultivation.

But in some cases the zamindari tenant (the pattadar or inamdar) himself supplies one pair of bulls, and ploughs the land, while the cultivator simply helps him in his work. In that case only one-sixth of the produce is given to the cultivator. If the

31: Slater S-5 (1916-1917) 1918 AW1 India
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427 zamindari tenant supplies two pairs of bulls, one-eighth goes to the cultivator.

● 241 In the case of sugarcane, the cultivator gets 1½ shares and the zamindari tenant only one. If the sub-tenant cultivates on contract, the cultivator must give two maunds of jaggery for every 2½ cents of land planted with sugarcane.*

Of the agricultural families, all the males cultivate some land and also work for hire. There are two females, however, who do not cultivate, of whom one lives on charity and the other by working as a coolie.

[423] Of the lands which are called "Sirkar" there is only one kind of ownership and holders of such land are called pattadars.

As regards lands designated "inam" lands there are slight differences. The inamdars pay, instead of the full rent, what are called quit-rents and road-cess.

463 There are five villagers who combine agriculture with other occupations. One is a blacksmith, the other a potter, the third prepares combs, and two others are dhobis. The sub-tenants mentioned above also do the work of coolies between harvest and sowing time.

243 *Agriculture.*—All dry lands yield only one crop per annum. Wet lands yield two crops. No land yields three crops.

For millets and pulses, the land is ploughed after a shower of rain when it is soft. Generally June or July is seed time. After a time when the plants sprout up the fields are weeded. After that four or five good showers of rain are needed. Then when the corn is ripe, it is cut and piled in bundles. The bundles are trod upon by bulls and the corn drops out.

For paddy the harvest time is November for the first crop, for which seed is sown in June or July; April and May for the second crop, for which seed is sown in December or January. When there is sufficient water the paddy fields are flooded with water and then ploughed till they become miry. Afterwards, green leaf manure (generally kanaga leaves) and animal manure are spread and well trodden in. Before planting paddy is steeped in cow-dung water in pots, which water is renewed every day. After four or five days the plants sprout up and then they are removed from the pots and placed in the prepared fields. After they are thus planted the fields are again flooded with water. But the water is allowed to remain for a day only. The next day it is let out and the fields are allowed to dry for three days when the plants are of some size. From that time onwards till the corn is ripe water is allowed to flow freely on the fields. When it is ripe it is harvested. Then it is cut, heaped in bundles, struck against a bed of rock when the grain falls out which is all collected and taken home.

249 *Sugarcane.*—The land is well ploughed, but unlike paddy is not made miry at first. Long trenches of comparatively little depth are made by means of the ploughshare. Then the field is well manured, and water is let in till it becomes miry. The sugarcane already cut in small pieces is planted in these trenches. No water is let in on that day. After an interval of three days water

[804] *[This must be taken to mean, not the Railway or Bengal maund of 82½ lb., but a local maund of 26 lb. very nearly. The rent in jaggery is therefore nearly one ton per acre, worth about Rs. 150.—Ed.]

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249 is again let in once in three or four days. After a comparatively short space of time when the plants have grown, the heaps of earth separating the two rows of plants are made higher and broader. From that time onwards water is let in once in three or four days till the crop is full. After three months when the cane has grown, two or three stalks are bound together by means of its dried leaves. When the stalks are still higher once more they are tied together at the top. Then long rods with forked ends are planted in the ground and long bamboos are laid in a line with the trenches, resting in the forks and the canes are tied to them. In this way the binding goes on for about eight or nine months as the stalks grow longer and longer. When they are full they are cut and removed. The crop is carried about one year or a little more after the cultivator starts getting the land ready. The country wooden plough is used for all purposes, the other implements being yoke, picottah bucket made of leather and sometimes of iron, *yetham-bana*,* *palikimanu*, *guntaka*, *gorru*, *palikiguntaka*, *mamoti*, reaping hook, shorthandled hoes.

231 *Stock*—

Working oxen	45	including paracheri.
Oxen not in a fit condition to work ...	65	
Male buffaloes	6	
Cow buffaloes	15	
Young stock of above species up to a year old	59	
Horses	...	
Donkeys and mules	4	
Sheep	47	
Goats	8	
Pigs	18	
Cows	85	

The cattle are of the well-known Punganur breed, rather light, but quick and active. The villagers breed cattle, and buy and sell in the cattle fair held annually in Punganur.

241 *Manuring.*—Most of the dung, about 90 per cent, is used as manure, the rest being utilized for household purposes.

237] Cattle urine is allowed to run to waste. The dung of goats, sheep, pigs, donkeys is used as manure.

Except the leaf of the kanaga tree, no green manure is used. This is obtained from topes planted many years ago. Sometimes it is taken on contract from the zamindar from the jungle all round.

There are practically no gardens, all the lands being used to grow grain. It is only now that beginnings are being made. Small plots of land are being planted with mango-grafts. The karnam of the village started this.

242 *Insect-pests.*—*Thellachida* affects generally paddy crop, eats away the leaves and stalks.

782 *Pethachida* affects all crops; consists of innumerable kinds of insects, eating away all the leaves.

Aggijadyam.—Paddy turns a vivid scarlet.

Kondapurirogam.—The worst pest affecting rice. The whole crop is consumed as by fire. The long stalks get shrivelled up to a ridiculously small length. To get a crop is impossible when once this sets in.

Locusts.—These destroy the crops.

* Vide p. 105.

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Agriculture.—Area under each of the principal crops :—

	ACRES.		ACRES.
Paddy	123·17	Ragi	171·9
Sugarcane	4·21	Cholam (for cattle) ...	4·27
Coconut topes ...	2·11	Sazzulu	0·27
Other fruit trees and scattered shade trees	11·21	Chamulu	6·36
		Gram	8·30
		Dholl	6·31
Betel gardens ...	1·4	Groundnut	12·15
Plantain	4·22	Castor seeds	2·4
Mango	1·0	Other crops	18·10

Out of the dry land, nearly 250 acres yield only one crop per annum, about 60 acres two crops. Almost all of the wet land yields two crops. There is no land yielding three crops per annum.

The methods of cultivation are the same as in Thettupalli in the Chittoor district of the Madras Presidency.

Implements.—In one house only an iron plough * is used. The rest use the country plough made of wood. 407

Other agricultural implements used are yoke, picottah, *yethambana*, hoe, *guntaka*, *donthi*, *pandluminu*, *gorru*, *palikiguntaka*, *mamoti*, scythe and other minor implements. 412

The *gorru* is a seed-drill, with a bowl to put the seed in, and bamboo tubes to distribute it. The *guntaka* is a six-bladed harrow, the *palikiguntaka* a twelve-bladed harrow. The *donthi* is a log of wood with twenty wooden teeth, each 5 inches long and half an inch thick, with a curved contrivance at the end of the handle which the driver holds against his stomach. It is used for powdering the soil. The *pandluminu* is a variety of the same.

231

Stock—

Oxen	144	
Cows	111	
Male-buffaloes	...	
Cow-buffaloes	5	(These do not thrive well here).
Young stock of above species.	103	
Horses	4	
Donkeys	15	
Mules	...	
Sheep	27	
Goats	14	
Pigs	4	

In the mornings cows are fed with grass, gram well pounded with the addition of water and rice bran. Then they are let out to graze in the fields. In the evening they receive the same as in the morning and oil-cake. They are also fed with rice straw and ragi straw. Sometimes cholam also is used and its stalks.

Bulls receive almost the same as cows, but are given less of green grass. Gram is fried and made into flour and then used; also Bengal gram and oil cake.

[* The Mysore State Department of Agriculture manufactures and sells cheap and handy iron ploughs. The general use of these would be of immense advantage on dry land.—Ed.] 654

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231 Horses are fed on grass and gram chiefly, sometimes also on oats and bran.

237 *Manuring.*—Nearly 90 per cent of the cow-dung is used as manure, the rest being used for household purposes.

Almost all the cattle urine is allowed to run to waste except trifling quantities used for household purposes.

241 The green manure chiefly used is the leaf of the Kanaga tree. Generally all kinds of green leaf are held to be good manure. This is obtained chiefly from the surrounding jungle, licences being obtained on payment of a fee to the Maharaja's Government. Sometimes topes are planted for the purpose.

No other kinds of vegetable manure are largely used. In some cases, for instance in the cultivation of sugarcane, the refuse left after the oil has been squeezed out from the fruit of the Kanaga tree is used.

232 Insect-pests and cattle diseases and the method of combating them are the same as in Thettupalli.

361 *The village.*—The village occupies an area of 9·36 acres. The tendency is for the members of one caste to congregate together. For example all the Muhammadans live in one part of the village together. The Komatis live exclusively in one street.

342 The depressed classes live in dirty and squalid huts of but one room.

There are in the caste village 85 thatched houses, none tiled, 63 terraced; in the Paracheri, only thatched houses 31 in number. There are no gardens adjoining any of the dwellings. The fields lie adjoining and surrounding the village. The most distant field lies about three-quarters of a mile off.

There is a great demand for additional building sites.

435 If land is obtained direct from the Government a fee of ½ anna per square yard is charged, payable on sale. If dry land is acquired for the purpose from pattadars, the value ranges from Rs. 100 to Rs. 150 per acre. It is only near this village that the value is so low. Further up the value goes up to nearly Rs. 300 or Rs. 350.

463 *Subsidiary industries.*—There are only two pariahs who weave at all. They use two handlooms.

[281] No hand spinning is practised. Yarn is bought ready made. The other crafts are—

Crafts.	Average time.	Earnings per year.	Remarks.
Blacksmith.	The major part of the day.	About Rs. 300 a year.	He receives customary mamūls. At harvest time gets about 10 puttis of paddy. There are also inams in his name.
Potter ...	The major part of the day and almost throughout the year.	About Rs. 100 a year.	Do.
Carpenter ...	For the major part of the year.	About Rs. 150 a year.	No mamūls.

438 *Village trade—Purchase of commodities by the village.*—Wood for implements is got from the forests already mentioned. Iron

1 [See category 116, pp. 99-100.—Analyst]

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Sandy tracts with palmyras fetch a rent of Rs. 10 per acre, without trees, Rs. 2 or 3 only; black clay Rs. 15 to 16 per acre. 427

The black clay land sells at about Rs. 350 per acre, the red sand at about Rs. 150. But the price has fallen now owing to two bad harvests. 435

Stock.

231

	By official information.	Non-official.
Working oxen	539	800 about.
Cows	412	600 „
Male buffaloes	6	14 „
Cow buffaloes	184	200 „
Young stock—buffaloes	208	250 „
Do. cows	637	650 to 700
Horses	...	...
Donkeys and mules	...	...
Sheep	58	61
Goats	225	200
Pigs	100	...

According to the census of 1900 and 1910 they were—

	1900.	1910.
Bullocks and he-buffaloes	650	545
Cows	580	412
She-buffaloes	171	184
Young stock	802	845
Sheep and goats	778	283

The straw of cholam and paddy is reserved for the summer feed of cattle; in the rainy season the green grass of the common pasture is available. Each ryot reserves one or two fields for pasture for his cattle. In days of heavy work, the bullocks are given cooked horsegram mixed with the husk of paddy, and the fine dust from the grain which is mixed with it in husking. Cotton seeds are also cooked and given for food; and oil cake, especially for milch cows. Ryots who have insufficient pasture send some of their cattle to the Agency tracts for the three months, July to September; they are charged Rs. 3 or 5 per pair.

Only about 50 per cent of the cattle-dung is used as manure, the rest is used for fuel. The average ryot applies six to eight cart-loads of dung per acre; besides the manure of the cattle kept in fields at nights. He accumulates a stock at home throughout the year and applies it at the end of the year to the fields. 241 [231]

No green manure or chemical manure is used.

Garden cultivation has been tried as an experiment with water-supply from a well, lifted by a water pump got from Bombay. Lemons and plantains are planted. The pump required some slight repairs, which were delayed for want of a mechanic near by. The garden too has not yet proved to be decidedly profitable; and all the villagers laugh at it as an innovation. [176]

Cost of cultivation.—The following is an account of the expenditure for ten acres of an average ryot, obtained from four ryots. 241 435

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241 No exact accounts are possible, for the ryots do not keep any
435 record of them.

Items.	Rs.	A.	P.
2 Bullocks, for keep... ... ... (The figures given by the four ryots were Rs. 75, 80, 90, 80; two cows also are maintained out of this.)	80	0	0
2 annual servants (Rs. 50 and Rs. 25 respectively)	75	0	0
1 plough, its necessary implements	2	0	0
„ charges for making it	2	0	0
Seed for two crops	28	0	0
Coolies to weed two crops	40	0	0
Coolies to harvest it (some say even Rs. 20) ...	15	0	0
Government tax at Rs. 1-12-0 per acre	17	8	0
Rent, if the land is leased, at least	100	0	0
Perquisites at harvest time—			
to the head servant one bag	7	0	0
to the second servant half a bag	3	8	0
to the village barber three or four seers (at 8 seers per rupee)	0	8	0
to the washerman...	0	8	0
to the shoemaker, 16 or 20 seers	2	8	0
to three village servants, 2 seers each	0	12	0
To manure the fields in summer with rented flocks of sheep and goats, as is the custom, for eight or ten days at an acre a day; the tenant takes three-fourths of the milk on such days ...	35	0	0
Other agricultural implements (even higher) ...	5	0	0
Other repairs of the field, such as digging up the soil, etc.	5	0	0
Total expenses for ten acres ...	424	4	0

[132] During the last two years there were excessive rains; crops failed badly; there was double the expenditure for useless plants; the cultivators had to sow three times, so that the average expenditure for seed was trebled. Such extraordinary expenditures are frequent. But assuming the season is favourable the utmost that the cultivator can get is—

	Rs.	A.	P.
40 bags of paddy at Rs. 4½ per bag	170	0	0
20 bags of gingelly at Rs. 7½ per bag	150	0	0
30 bags of cholam at Rs. 6¼ per bag	187	8	0
20 bags of Bengal gram at Rs. 8-5-4 per bag ...	175	0	0
20 bags of red gram at Rs. 7½ per bag	150	0	0
Black gram	8	0	0
Total ...	840	8	0

The average crop is Rs. 560 or Rs. 600 per annum. The cultivator can moreover earn in summer 90 or 100 rupees by letting out his cart to convey jaggery.

361 The area of the village-site is 33 acres 32 cents. The dwellings of the depressed castes, about 125 in number, are crowded